

# INFORMATION REPORT INFORMATION

## CENTRAL INTELLIGENCE AGENCY

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**S-E-C-R-E-T**

COUNTRY	East Germany/USSR	REPORT		25X1
SUBJECT	Russian Interest in the Production of VEB Funkwerk Keopenick	DATE DISTR.	10 June 1955	25X1
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			This is UNEVALUATED Information	25X1

SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

### Transmitter quartzes

1. The ships' combined transmitter and receiver sets, which are to be supplied to the USSR by VEB Funkwerk Keopenick during 1955, will each be equipped with 11 quartzes for the same frequencies as those sets supplied in 1954, as follows: 1

a. Medium frequencies	Quartz frequency	Transmitter frequency
Quartz 1	205 kcs	410 kcs
" 2	227 "	454 "
" 3	1262 "	500 "
b. Intermediate frequencies		
Quartz 1	835 "	1650 "
" 2	1031 "	2182 "
" 3	1262.5"	2535 "
c. High frequencies		
Quartz 1	3670, 3510, 3280, 4140 12420 & 16560 kcs	
" 2	2023.83, 6250 kcs	
" 3	2103.83, 12600 kcs	

and also with reserve quartzes for high frequencies as follows:

Quartz 4	Quartz frequency	Transmitter frequency
" 5	1560 kcs	3150 kcs
	2085 kcs	4170 kcs

(These are in addition to the 1.5 mcs calibration quartz supplied with each set)

2. In the calibration tables to be supplied with the sets, the following frequencies are to be specifically marked:

**S-E-C-R-E-T**

STATE	X	ARMY	X	NAVY	X	AIR	X	FBI		AEC						
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(Note: Washington distribution indicated by "X"; Field distribution by "#")

S-E-C-R-E-T

-2-

25X1

a. Medium frequencies  
425, 480 & 512 kcs

b. Intermediate frequencies  
2546, 2566, 2625, 2635,  
2650, 2815 & 2900 kcs

c. High frequencies

4120, 4182, 6276, 6310, 8240, 8310, 8364,  
11040, 13552, 16620 & 16720 kcs

#### HF filters for transmitters

3. VES Funkwerk Koepenick have offered the USSR HF filters with the specifications set out below. Such filters are fitted to transmitters when their aerials and those of short-wave receivers are close together and are required to operate at the same time. They have a dual function:

- to stop high voltages being induced by the transmitter in the receiver aerial and passing into the receiver, and
- to cut off, by short-circuiting, the receiver input when the voltage developing at that point exceeds a prescribed maximum.

#### Technical data:

Pass band width	$f \geq 3$ mcs
Characteristic impedance	60 ohms
Attenuation between 3 and 24 mcs	$0.1 \pm 0.06$ neper
" at 600 kcs	7.8 neper or 68 db.
Protective ranges	3 to 7 mcs
	6 " 17 mcs
	10 " 24 mcs
Inductive coupling	mutual inductance in 4 stages
Automatic at maximum voltage	
Minimum voltage for attenuation	about 2 volts effective
Attenuation	5 neper or 44 db.
Tubes	One 6H6
Power supply	220 V at 50 cs.
Current requirement	about 120 m A
Fused at	250 m A
Dimensions	chassis: 520 mm x 168 mm x 275 mm
	table instrument: 550 mm x 190 mm (+ 30 mm for rubber feet) x 310 mm (+51 mm for the cable lead-in)
Weight	about 23 kg.
Specification number	1671.005 - 00001
	1671.011 - 00001

#### Audio-frequency analyser A-11

4. The instrument provides for the analysis by frequency and by amplitude of the complete frequency spectrum, from 20 cs to 20 kcs.

#### Technical data:

Operating voltage	220 volts at 50 cs.
Power requirement	about 130 watts
Input resistance	1 Megohm
Input capacitance	40 $\mu$ F
Load resistance	about 3 k ohms
Tubes (for analyzer component)	five ECC 91
	one 80
	" 80
	" 6 A7
	" 280/40
	" 7C/6

S-E-C-R-E-T

25X1

S-E-C-R-E-T

-3-

25X1

Tubes (for indicator component)

one 80  
 two EAA 91  
 one 2CC 91  
 " 280/40  
 570mm x 551 mm x 356 mm  
 65 kg.

Dimensions

Weight

Miscellaneous instruments

5. a. Calibration potentiometer: the USSR Trade Delegation is pressing for the completion of this order and a report has been submitted on the work done in the third quarter of 1954; a supplementary account for expenditure during development has also been submitted to the delegation<sup>2</sup>.
- b. Echolots: a report has been submitted on the Atlas echolot. Eleven echolots are currently on order for the USSR.
- c. Universal pulse generator: a supplementary account of expenditure during development has been submitted to the Soviet Trade Delegation, who are pressing for the completion of this order.
- d. 20 lugger wireless sets have been ordered by the office of the Soviet Sea Register in Rostock.
- e. 250 anemometers were delivered to the USSR in November 1954.
- f. Cases of radio components are being delivered to the USSR. The contents are in accordance with an approved list.
- g. Communist China has ordered 12 oscillographs of type OG 2 I d. Documentation accompanying this order is to be translated into English.

Material-testing for the USSR Sea Register, Rostock

6. A sample of insulating material to be used as waterproofing for the outer covering of the main radio cabin of the ship SOVIETSKI SOUTZ was subjected to HF testing at VEB Funkwerk Koepenick on 13 December 1954 with the following results:
  - a. DC test: broke down at 12,000 volts
  - b. AC test at 50 cycles: broke down at 8,000 volts
  - c. AC test at 500 kcs: broke down at 4,000 volts

For the purpose of comparison, a test was made on the material to be used for the protection of the transmitter, with the following results:

- a. DC test: broke down at 35,000 volts
- b. AC test at 50 cycles: broke down at 32,000 volts
- c. AC test at 500 kcs: broke down at 600 volts

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25X1

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the short-wave section of this instrument has had to be redesigned.

25X1

S-E-C-R-E-T

25X1

25X1

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